

EPA/OPP MICROBIOLOGY LABORATORY
ESC, Ft. Meade, MD

Standard Operating Procedure
for
Monitoring Temperature/Humidity of the Sample Storage Room

SOP Number: QC-08-02

Date Revised: 08-29-02

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1.0 SCOPE AND APPLICATION:

1.1 This protocol describes the quality control requirements for recording the temperature/humidity of the sample storage room D204 and additional storage areas in B201.

2.0 DEFINITIONS: None

3.0 HEALTH AND SAFETY: Not applicable

4.0 CAUTIONS: None

5.0 INTERFERENCES: None

6.0 PERSONNEL QUALIFICATIONS:

6.1 Personnel are required to be knowledgeable about the procedures in this SOP.

7.0 SPECIAL APPARATUS AND MATERIALS:

7.1 Fisher Traceable Big-Digit Hygrometer/Thermometer, serial number 21087790; manufacturer claims an accuracy of $\pm 1^{\circ}\text{C}$ for thermometer and $\pm 2\%$ RH (mid-range) or $\pm 4\%$ RH (outside mid-range).

7.2 Fisher Traceable Big-Digit Hygrometer/Thermometer, serial number 21281160; manufacturer claims an accuracy of $\pm 1^{\circ}\text{C}$ for thermometer and $\pm 2\%$ RH (mid-range) or $\pm 4\%$ RH (outside mid-range).

7.3 VWR Digital Humidity and Temperature Meter, serial number 98236519; manufacturer claims accuracy of $\pm 1^{\circ}\text{C}$ or F for thermometer and $\pm 2\%$ RH (mid-range) or $\pm 4\%$ RH (ends of range).

8.0 INSTRUMENT OR METHOD CALIBRATION:

8.1 The Fisher and VWR digital humidity and temperature meters are calibrated against a NIST traceable thermometer on an annual basis by a company certified to perform such calibrations.

9.0 SAMPLE HANDLING AND STORAGE: Not applicable

10.0 PROCEDURE AND ANALYSIS:

10.1 The set point for the Environmental Science Center heating/cooling system is $68\pm 2^{\circ}\text{F}$ ($20\pm 1^{\circ}\text{C}$) in the winter and $70\pm 2^{\circ}\text{F}$ ($21\pm 1^{\circ}\text{C}$) in the summer. The temperature and relative humidity of sample storage room D204 and the sample storage area in room B201 (flammable storage cabinets) will be recorded once daily each working day (Monday through Friday excluding holidays and days when the ESC is closed for any reason) on the appropriate Temperature Record form (see 16.0). For the storage located in room B201, the temperature and humidity are taken from an area in close proximity to the sample storage cabinets.

11.0 DATA ANALYSIS/CALCULATIONS: None

12.0 DATA MANAGEMENT/RECORDS MANAGEMENT:

12.1 The temperature and relative humidity of sample storage areas (room D204 and the sample storage area in room B201) is to be recorded promptly, legibly and in indelible ink on the Sample Storage Room Temperature/Humidity Record Form (see 16.1). Completed forms are archived on a yearly basis in notebooks kept in locked file cabinets in the file room D217. Archived data is subject to OPP's official retention schedule contained in SOP ADM-03, Records and Archives.

13.0 QUALITY CONTROL:

13.1 The OPP Microbiology Laboratory conforms to 40 CFR Part 160, Good Laboratory Practices. Appropriate quality control measures are integrated into each SOP.

13.2 For quality control purposes, the required information is documented on the appropriate forms (see 16.1).

13.3 The digital temperature/ humidity meters are calibrated annually against NIST traceable thermometers by an ISO 9001 certified company. The calibration certificates of humidity/temperature meters are maintained in "Thermometers Calibration Certificates" notebook, which is archived in the

laboratory's file room D217.

14.0 NONCONFORMANCE AND CORRECTIVE ACTION:

14.1 If the temperature of the sample storage room or area is not within the target temperature range ($20\pm 5^{\circ}\text{C}$), building authorities will be contacted to initiate adjustments/repairs to the air supply system.

14.2 If the temperature of the sample storage room or area deviates significantly from target temperature range for an extended period, Office of Enforcement and Compliance Assurance (OECA) will be contacted for advice on sample retention/disposal.

15.0 REFERENCES: None

16.0 FORMS AND DATA SHEETS:

16.1 Sample Storage Room Temperature/Humidity Record Form.

Sample Storage Room Temperature/Humidity Record Form OPP Microbiology Laboratory

Month/Year: ____/____		Target Temperature: 20±5°C		
Room #: ____		Thermometer ID/Correction Factor: ____/____ °C		
Day	Time/Initials	Temperature	Humidity	Notes /Comments
1				
2				
3				
4				
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